

CALSTRS

Sustainability Report

Fiscal Year 2017-18



GLOBAL
STEWARDSHIP
AT WORK

Global Stewardship at Work



CalSTRS, the California State Teachers' Retirement System, is the trusted steward of the largest educator-only pension fund in the world, and the second largest pension fund in the United States. Organizational sustainability is fundamental to the products we provide—valuable, lifetime retirement, disability and survivor benefits for nearly 950,000 California public school educators and their beneficiaries.

Our members are woven into the fabric of every community throughout California. Their efforts in education provide tools students need to achieve their goals, contributing to the foundation of society which brings economic wealth, social prosperity and political stability. Our educators are a constant in the California landscape.

Most classroom teaching in California is performed by career teachers, and nearly half of teachers will retire with 30 or more years of service. At CalSTRS, we have relationships with our members that extend well beyond their classroom careers and can last 70 years or more. In 2018, 323 of our members were 100 years or older.

It is with this steadfast focus and sense of purpose that CalSTRS fulfills its mission of securing the financial future and sustaining the trust of California's educators. We advance sustainability practices that promote long-term value creation, responsible investment strategy, stewardship of our natural resources, and engagement with our stakeholder community.

In addition to dedicated staff who engage with our stakeholders, we gather input through external and internal surveys. Stakeholder input yielded three material topics addressed in this report: the path to full funding, retirement preparedness and cybersecurity, which are interconnected economically and socially.

Though there are a wide variety of voices and opinions regarding the CalSTRS defined plan and public pension plans in general, the funding plan is working as designed. There is shared responsibility and gradual contribution rate increases for members, employers and the State of California over the past several years. Investment returns have historically accounted for about 60 percent of the resources necessary to fund CalSTRS benefits.

After a 30-year career, an educator's benefit is expected to replace about 60 percent of their preretirement income. We dedicate resources to emphasize awareness and retirement education planning for our members during their careers. We provide them with tools to determine their financial goals throughout each career stage so they are well prepared for their future in retirement. Once vested, the guarantee of a lifetime source of retirement income relieves stress and uncertainty about the future. While the CalSTRS Investment team leverages their asset management expertise to invest contributions, our members can invest greater focus on California's students.

With these long relationships, CalSTRS is the trusted repository for a large amount of member data, including employment history and personal and financial information. Securing the confidentiality and integrity of member and organizational data is one of our most critical activities. In our latest

materiality survey, our members identified cybersecurity as their top issue of concern. We share this priority and take steps accordingly. The cybersecurity landscape evolves rapidly, and we have installed multiple lines of defense against potential security threats. These processes are fundamental to our organizational sustainability and create a high-trust environment with all of our stakeholders.

We believe a corporate environment with sustainable values increases profitability. As trusted fiduciaries, CalSTRS staff and third-party experts continually monitor the financial health of the fund by providing actuarial valuation and funding levels risk reports to the Teachers' Retirement Board each year. The results of both reports confirm that CalSTRS continues to make progress toward the long-term funding goal passed in July 2014 as part of Assembly Bill 1469 (Bonta).

This sustainability report, covering the 2017-18 fiscal year, illustrates the power of global stewardship at work. Within every facet of our operations, CalSTRS strives to apply diligence, care and fiduciary responsibility to our decisions and recommendations to ensure we are a fully sustainable organization for our current and future members and their beneficiaries.

Respectfully submitted,



Jack Ehnes
Chief Executive Officer

2017-18 Sustainability Report

About CalSTRS.....	06	Retirement Preparedness	32
About CalSTRS.....	07	Retirement Preparedness	33
Core Values.....	08	CalSTRS Hybrid Retirement System	35
Strategic Plan Goals	09	Helping Our Members Prepare	37
Executive Staff	10	2018 Annual Member Survey Results.....	38
Teachers' Retirement Board	11		
Member Profile	14	Cybersecurity & Responsible	
Office Locations and Employees.....	16	Business Practices	39
2017-18 Fiscal Performance Highlights	17	Information Security at CalSTRS.....	40
		A Culture of Ethics and Integrity	42
Our Sustainable Values	18	Supporting Responsible Contractors and Suppliers	45
Sustainability Vision and Guiding Beliefs.....	19		
Leading the Direction in Sustainable Finance.....	20	CalSTRS' Sustainable Employee Culture	47
Sustainable Investing.....	22	Headquarters' Environmental Performance	48
		Supporting Sustainable Lifestyle Options	53
Stakeholder Engagement	24		
		Global Reporting Initiative	
Path to Full Funding	26	Content Index	54
Path to Full Funding.....	27		
The Value of Investments	30		
Funding Levels and Risks.....	31		

Report Profile

This CalSTRS *Sustainability Report* provides an overview of the relative data and assessment of the material topics covering July 1, 2017, through June 30, 2018, (and, where noted, later into calendar year 2018). This report has been prepared in accordance with the Global Reporting Initiative Standards: Core option. This is the fifth year we have produced our annual GRI report.

The report's boundary and scope include our West Sacramento headquarters building, six member service centers—one located within the headquarters building—and financial information from the State Teachers' Retirement Plan. Most data are aggregated statewide across our six California locations, with some data specific to our Northern California headquarters.

Energy, water, greenhouse gas emissions, alternative transportation and waste diversion figures reported represent our West Sacramento headquarters' performance. Member service centers do not materially affect our energy and water performance because utility savings and usage are primarily controlled by lease agreements.



Assurance

CalSTRS currently has no policy on the report's external assurance but strives to provide accurate, transparent and internally verified information.

CalSTRS' Internal Audits staff performed an independent and objective review of the information

submitted in this report. Our internal audit procedures were designed to obtain a limited level of assurance over the measurable statements and facts.

For questions or comments about this report, email us at Sustainability@CalSTRS.com.



ABOUT CALSTRS

About CalSTRS

The California State Teachers' Retirement System provides retirement, disability and survivor benefits to California's full-time and part-time public school educators from prekindergarten through community college and public school administrators. Our global investments are managed both internally and externally. CalSTRS is the largest educator-only pension fund in the world.

Founded in 1913, CalSTRS started with 15,000 members and a very small asset base. As of June 30, 2018, we represent 949,512 members and their beneficiaries with a net position of \$225.8 billion.

In 1913, the annual benefit was \$500; currently, the median Member-Only Benefit is approximately \$4,321 a month. Decade after decade, CalSTRS'

Mission

Securing the financial future and sustaining the trust of California's educators

Vision

Your Reward—A Secure Retirement

Our Reward—Getting You There

mission has remained the same: to secure the financial future and sustain the trust of California's educators now and for generations to come.

CalSTRS is a component unit of the State of California and a cost-sharing plan that administers a hybrid retirement system consisting of a traditional defined benefit plan, two cash balance plans and a defined contribution program, CalSTRS Pension2®.

The Teachers' Retirement Law (California Education Code section 22000 et seq.), as enacted and amended by the California Legislature, established these plans and CalSTRS as the administrator. The terms of our plans may be amended through legislation.

Note: Due to the timing of when membership numbers were pulled, there will be a difference between the numbers reported in this section and final fiscal year numbers.

Core Values

The CalSTRS Core Values are a set of attitudes, beliefs and behaviors that define CalSTRS and our employees. CalSTRS' core values orientation is an important component of our onboarding program and contributes to our sustainability practices.

2017-18 Virtuosos



Employees who consistently exhibit our core values are nominated and selected for our highest honor, the annual Virtuoso award.

Front row: Steven Le, Christine Martinez, Peter Mock, Prashant Mittal.
Second row: Kirsten Casella, Valerie Getz, Monica Davila.
Back row: Cemme Meyer, Jeff Duesing, Kevin Kirkpatrick, Melissa Gould.

Core Values

CUSTOMER SERVICE

We never compromise on quality as we strive to meet or exceed the expectations of our customers.

ACCOUNTABILITY

We operate with transparency and accept responsibility for our actions.

LEADERSHIP

We model best practices in our industry and innovate to achieve higher standards.

STRENGTH

We ensure the strength of our system by embracing a diversity of ideas and people.

TRUST

We conduct ourselves with integrity, acting ethically in every endeavor.

RESPECT

We respect the needs of our members, co-workers and others, treating everyone with fairness, honesty and courtesy.

STEWARDSHIP

We recognize our fiduciary responsibility as the foundation for all decision-making.

Strategic Plan Goals

Our 2016–19 strategic plan is designed to maintain the viability of our fund in perpetuity and secure the financial future of California’s educators.

The strategic goals for fiscal years 2016-19 cover four broad areas of focus:



Financial *Ensure a financially sound retirement system.*

Our primary goal is to ensure a financially sound retirement system. We remain focused on achieving full funding of the CalSTRS Defined Benefit Program according to the plan established by the California Legislature in July 2014. We are committed to investing responsibly over the long term, while continuing to add value.



Member/Employer *Enhance services to members and employers.*

Our vision is to ensure that our members understand their retirement benefits and make smart decisions today to secure their financial futures. We highlight our partners in this responsibility—our members’ employers. Accurate data and complete reporting of member information are just as critical to a secure retirement as the employer’s role in educating employees about their benefits.



Business Transformation *Drive operational excellence.*

Our priority is to implement and integrate a new pension administration system for CalSTRS, BenefitConnect, to better serve our members, employers and employees. The Pension Solution project prepares our staff, partners, business processes and data for a successful implementation, to be rolled out in a phased approach starting late 2019 and continuing through 2022.



Workforce Transformation *Grow an engaged, highly skilled and diverse workforce.*

Our goal is to create a workplace that engages employees and helps us deliver optimum service and efficient performance. We know an engaged workforce contributes to engaged members, and initial research indicates a relationship between member engagement and retirement preparedness. We strive to hire the right individuals for the right job at the right time and provide an engaging and inclusive work environment.

Executive Staff



Jack Ehnes
Chief Executive Officer



Cassandra Lichnock
Chief Operating Officer



Christopher J. Ailman
Chief Investment Officer



Brian J. Bartow
General Counsel



Julie Underwood
Chief Financial Officer



Grant Boyken
Public Affairs Executive Officer



Ashish Jain
Chief Technology Officer



Lisa Blatnick
Chief of Administrative Services



Andrew Roth
Benefits and Services Executive Officer

Teachers' Retirement Board

Fiscal Year 2017-18



Dana Dillon
Board Chair
K-12 Classroom Teacher



Sharon Hendricks
Board Vice Chair
Community College Instructor



Harry M. Keiley
K-12 Classroom Teacher



Karen Yamamoto
Retiree Representative



Nora E. Vargas
School Board Representative



Joy Higa
Public Representative



Paul Rosenstiel
Public Representative



Thomas Unterman
Public Representative



Michael Cohen
Director of Finance
Ex-Officio Member



Betty Yee
State Controller
Ex-Officio Member



Tom Torlakson
State Superintendent
of Public Instruction
Ex-Officio Member



John Chiang
State Treasurer
Ex-Officio Member

Teachers' Retirement Board

CalSTRS is governed by the 12-member Teachers' Retirement Board, which has plenary authority under the California Constitution. The board sets the policy and provides direction for the system and is responsible for ensuring the system pays benefits in accordance with the law. The board has exclusive control over the investment and administration of the Teachers' Retirement Fund and is composed of:



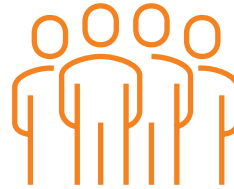
Three member-elected positions representing current educators



Three public representatives appointed by the Governor and confirmed by the Senate



A retired CalSTRS member appointed by the Governor and confirmed by the Senate



Four ex-officio members:

- » Director of Finance
- » State Controller
- » State Superintendent of Public Instruction
- » State Treasurer



A school board representative appointed by the Governor and confirmed by the Senate



Watch the Sustainability Report videos

Board Vice Chair Sharon Hendricks describes how Teachers' Retirement Board actions advance CalSTRS as a global, forward-thinking, sustainable organization.

Teachers' Retirement Board's Six Standing Committees

Committee	Purpose
Appeals	The Appeals Committee provides a dedicated body to hear, deliberate upon and decide appeals of CalSTRS determinations pursuant to the Administrative Procedure Act.
Audits and Risk Management	The Audits and Risk Management Committee assists the board in fulfilling its fiduciary oversight responsibilities for financial reporting, risk management, internal control, compliance, internal audit, external audit of the financial statements, and engagements with other external firms.
Benefits and Services	The Benefits and Services Committee develops and oversees the execution of prudent policies relating to levels of benefits and the delivery of services to CalSTRS members, retirees and beneficiaries.
Board Governance	The Board Governance Committee supports the board in promoting the best interests of CalSTRS, its members, retirees and beneficiaries through the implementation of sound board governance policies and practices that enhance good, fair and open decision-making.
Compensation	The Compensation Committee provides oversight to CalSTRS compensation policies and plan that support the successful recruitment, development and retention of talent to meet the business objectives of CalSTRS.
Investment	The Investment Committee administers all matters relating to the investment of assets and investment management. The committee is charged with administering assets for the exclusive purpose of providing benefits to the participants and their beneficiaries and maximizing the financial stability of CalSTRS in an efficient and cost-effective manner.

Two advisory committees, the Employer Advisory Committee and the Client Advisory Committee, meet throughout the year to provide forums for active participation in forming CalSTRS policies and procedures.

Committee charters can be found in the *Teachers' Retirement Board Policy Manual* at CalSTRS.com/teachers-retirement-board.

Member Profile

Members and Beneficiaries

949,512

Total Members
and Beneficiaries

449,595

Active Members
Vested: 314,904
Non-vested: 134,691

198,058

Inactive Members
Vested: 39,942
Non-vested: 158,116

301,859

Retirees &
Benefit Recipients

Annual Retirement Statistics July 1, 2017-June 30, 2018

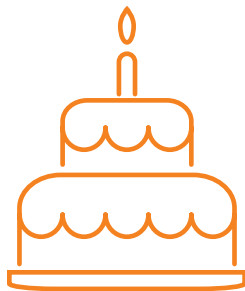


\$14.4 billion

Benefit payments which include service retirement benefits, disability benefits, survivor benefits and purchasing power supplemental payments

62.9

Median age
at retirement



25

Median years
of service credit



56 percent



Percentage of
members selecting the
Member-Only Benefit



12,778

Number of service
retirements during fiscal year

\$4,321

Median monthly
Member-Only Benefit



Retirement Benefits Fuel Local Economies

CalSTRS paid an estimated \$11.5 billion in benefits to 225,541 retirees living in California during fiscal year 2017-18. This map indicates the number of retired members living in each county and the amount of benefits paid to those members, as well as the locations of the CalSTRS member service centers.



County	Retirees
Alameda	7,567
Alpine	14
Amador	438
Butte	2,378
Calaveras	578
Colusa	124
Contra Costa	7,564
Del Norte	242
El Dorado	2,164
Fresno	6,269
Glenn	134
Humboldt	1,380
Imperial	788
Inyo	162
Kern	4,285
Kings	596
Lake	482
Lassen	223
Los Angeles	43,084
Madera	1,323
Marin	2,310
Mariposa	273
Mendocino	1,136
Merced	1,498
Modoc	88
Mono	178
Monterey	3,074
Napa	1,420
Nevada	1,608
Orange	21,109
Placer	4,247
Plumas	325
Riverside	12,457
Sacramento	8,982
San Benito	311
San Bernardino	9,284
San Diego	21,046
San Francisco	2,910
San Joaquin	3,938
San Luis Obispo	4,194
San Mateo	3,746
Santa Barbara	2,946
Santa Clara	9,341
Santa Cruz	2,774
Shasta	1,662
Sierra	74
Siskiyou	603
Solano	2,988
Sonoma	4,488
Stanislaus	3,159
Sutter	744
Tehama	705
Trinity	146
Tulare	3,054
Tuolumne	678
Ventura	6,799
Yolo	1,104
Yuba	347
Total	225,541

Office Locations and Employees

CalSTRS' headquarters is located at 100 Waterfront Place in West Sacramento. The building opened in 2009 with a LEED Gold certification for New Construction. LEED stands for Leadership in Energy and Environmental Design, a green building rating system developed by the U.S. Green Building Council. The 409,000-square-foot Class A office building operates under a LEED Platinum certification for Existing Building, Operations and Maintenance.

Since its Energy Star registration in 2011, the building has earned an average Energy Star score above 90 percent. In 2017, the building achieved the high score of 99 out of 100 on the Energy Star scale. In 2018, that score improved to 100. CalSTRS diverts more than 94 percent of generated ongoing consumable waste and reduces water use with low-flow water fixtures, an efficient landscape and irrigation system, and an occupant environmental awareness campaign.

CalSTRS has six member service centers located across the state in West Sacramento, Glendale, Santa Clara, Irvine, Riverside and San Diego, plus a small field office in Santa Rosa.

Workforce Profile

As of June 30, 2018

1,154

Total CalSTRS employees



59%

Female



41%

Male

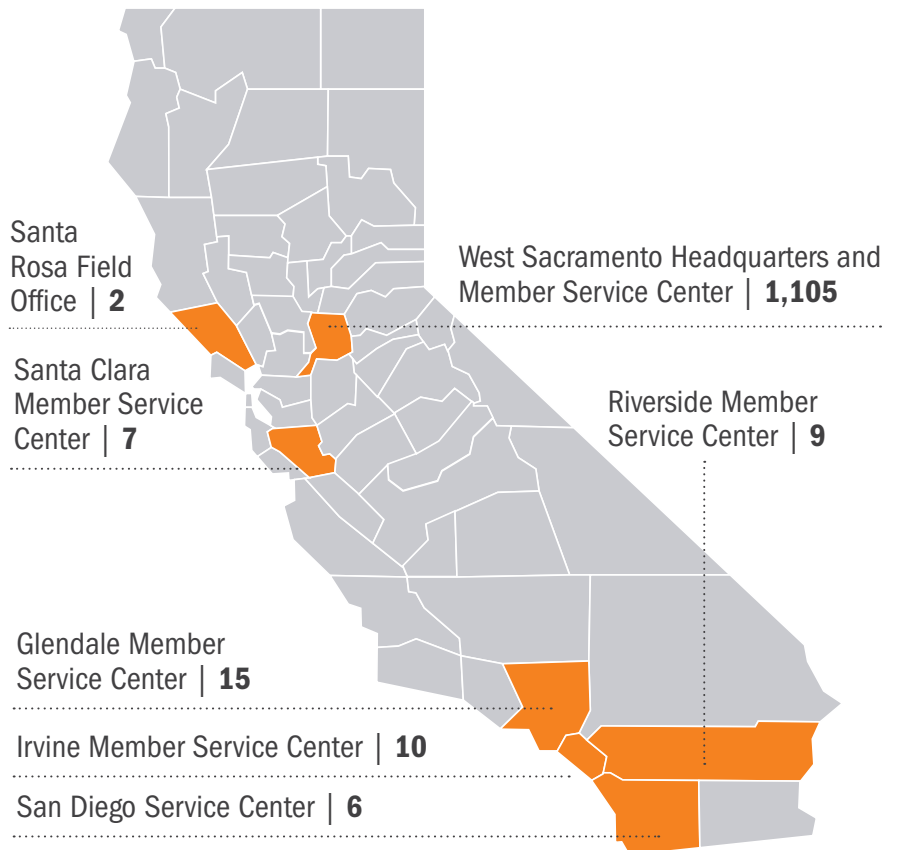
98%

Full-time employees; 2% are part-time or intermittent

68.5%

Percentage of all staff covered by bargaining units

Total Workforce by Region



2017-18 Fiscal Performance Highlights

The State Teachers' Retirement Plan posted a 9 percent return (net of fees) for 2017-18, exceeding the investment return assumption for the second consecutive year and helping advance the fund toward full funding in the decades ahead.

As a long-term investor projecting over a 30-year horizon, CalSTRS consistently emphasizes the long-term nature of pension funding and the need to look beyond the immediate effects of any single year's returns.

Our goal is to ensure a financially sound retirement system focused on achieving full funding of the CalSTRS Defined Benefit Program by 2046. The CalSTRS Funding Plan, effective in July 2014, is the overarching model of shared responsibility between CalSTRS members, employers and the State of California.



\$225.8 billion

Total Net Position of the State Teachers' Retirement Plan as of June 30, 2018



<http://bit.ly/CAFR18>

For full information on CalSTRS fiscal performance, refer to the *CalSTRS Comprehensive Annual Financial Report* for fiscal year 2017-18.

Financial statements and the related notes to the statements have been externally audited by an independent auditor.



**OUR
SUSTAINABLE
VALUES**

Sustainability Vision and Guiding Beliefs

Guiding Beliefs

CalSTRS' guiding beliefs shape our environmental, social and governance actions and interactions with our stakeholders.

1. CalSTRS supports sustainability programs that build environmental, social and governance principles into our core business and investment practices.
2. CalSTRS responsibly manages risk for the long-term financial strength of CalSTRS, to the benefit of our members, stakeholders and the environment.
3. CalSTRS engages with our stakeholders, business partners and our community on environmental, social and governance issues and principles to understand their insights and perspectives.
4. CalSTRS considers the global impact of our business practices in the use of natural resources within our facilities and through the procurement of goods and services.

Our Sustainability Vision

CalSTRS advances sustainability practices that promote long-term value creation, responsible investment strategy, stewardship of our natural resources and engagement with our stakeholder community.

5. All CalSTRS investments should seek to responsibly manage and disclose economic, social and environmental criteria in order to deliver sustainable and profitable, risk-adjusted returns.
6. CalSTRS encourages procurement of goods and services with contractors and supply chain vendors who incorporate sustainability and environmental, social and governance criteria into their business practices.
7. CalSTRS believes in providing a supportive work environment where employees are encouraged to develop and achieve their full career potential.
8. CalSTRS recognizes plan assets will contribute to and be affected by climate change and that appropriate risk mitigation must occur in order to deliver profitable, risk-adjusted returns.
9. CalSTRS discloses material sustainability issues and sustainable performance data.

Leading the Direction in Sustainable Finance

CalSTRS consistently demonstrates our ongoing commitment to corporate sustainability and provides guidance on environmental, social and governance issues that impact the Teachers' Retirement Fund. This is evidenced by our

participation as a signatory to the United Nations-supported Principles for Responsible Investment in early 2008 and membership in the Investor Network on Climate Risk.

Executives and senior level staff provide leadership to vital

organizations that drive strategic direction within the sphere of corporate sustainability and responsible long-term investing.

Members of our staff proudly serve in the following strategic leadership and membership roles:



Jack Ehnes, Chief Executive Officer

- » Global Reporting Initiative Board, Member
- » Bipartisan Policy Center, Executive Council on Infrastructure
- » Ceres Board, Member
- » FTSE Environmental Markets Advisory Committee, Chair
- » FTSE ESG Advisory Committee, Member
- » National Council on Teacher Retirement, President (October 2017–October 2018)
- » SASB Foundation Board, Member
- » Sacramento Downtown/Riverfront Streetcar Policy Steering Committee, Member



Christopher J. Ailman, Chief Investment Officer

- » 300 Club North American Chapter, Co-Chair
- » CFA Institute Steering Committee on Diversity, Member
- » EDHEC-Risk Institute Board, Member
- » Institutional Investor Roundtable for Public Funds Advisory Board, Member
- » MSCI Barra Index Editorial Advisory Board, Member
- » Milken Global Capital Markets Advisory Council, Co-Chair
- » Principles for Responsible Investment Asset Owners Advisory Committee, Member
- » Robert Toigo Foundation Advisory Board, Member
- » SASB Investor Advisory Group, Chair

CEO Elected President of National Council on Teacher Retirement

CalSTRS Chief Executive Officer Jack Ehnes was elected president of the National Council on Teacher Retirement, marking the first time a Californian has led the organization dedicated to safeguarding the integrity of public retirement systems in the U.S. and its territories. His one-year term began in October 2017.

Ehnes is a recognized leader and public servant, serving on high-profile national task forces

“My key objective as president is to develop NCTR’s capacity to identify and respond to policy and political issues that seek to undermine the retirement security of our nation’s educators.” –Jack Ehnes, CalSTRS Chief Executive Officer

throughout his career, including those with the National Association of Insurance Commissioners and on various healthcare, insurance commissions and advisory boards. Ehnes is a CERES board member

and was also a board member of the National Institute on Retirement Security and board chair of the Council of Institutional Investors. He has served as CalSTRS CEO since 2002.

Chief Investment Officer Receives Lifetime Achievement Award

CalSTRS Chief Investment Officer Christopher J. Ailman received Institutional Investor magazine’s first-ever lifetime achievement award. The award recognizes Ailman’s three-decade career, including 18 years at CalSTRS where he shepherded the portfolio’s growth from \$116 billion upon his arrival in 2000 to over \$228 billion in 2018. In addition, he led efforts to diversify the portfolio,

“This award is really a testament to the quality of the amazing staff here at CalSTRS. Working with the Teachers’ Retirement Board, we have created an atmosphere which promotes longevity among the senior leadership and diversity among the team.”

–Christopher J. Ailman, CalSTRS Chief Investment Officer

including creation of a Risk Mitigating Strategies asset class to complement global equities, real

estate, private equity, cash, fixed income, inflation sensitive, and innovative and strategic overlay.

Sustainable Investing

CalSTRS' primary mission is to ensure a financially sound retirement system which includes maximizing fund returns. The financial security of our members depends on well-managed, long-term financial performance. As the trusted fiduciary of members' contributions, CalSTRS must derive the most value from investments.

CalSTRS has well-established, thoroughly vetted investment strategies grounded in the board's investment beliefs. In February 2018, CalSTRS adopted Investment Belief 8—alignment of financial interests between CalSTRS and its advisors is critical. This completed our first-ever set of investment beliefs to provide overarching guidance on CalSTRS' investment decisions across our portfolio asset classes.

ESG risks are taken into consideration to the extent that such factors influence the financial



Chief Operating Investment Officer Debra Smith and Deputy Chief Investment Officer Scott Chan explain how Investments balances risk with opportunity to preserve the integrity and strength of the fund.

advisability of the investment, are a material risk to the fund, or weaken the trust of a significant portion of the members of the system. Fiduciary standards do not allow CalSTRS to select or reject investments based solely on ESG risks.

All CalSTRS investment managers—internal and external—use the

ESG policy to identify and assess the risks associated with an investment and to define areas of focus as they manage the portfolio and engage to affect change. All external active managers agree to adhere to the CalSTRS ESG Policy and annually certify their adherence to the policy as they buy and sell securities for CalSTRS.

Responsible corporate governance, including the management of environmental, social and governance factors, can benefit long-term investors like CalSTRS. —*Investment Belief 7*

CalSTRS Green Team Initiative Task Force

The CalSTRS Green Initiative Task Force, known as the Green Team, creates an annual report detailing the Investments Branch activities relating to environmental risk management and opportunity capture. This report reflects our recognition that environmental issues affect the performance of the CalSTRS Investment Portfolio across companies, sectors, regions and asset classes.

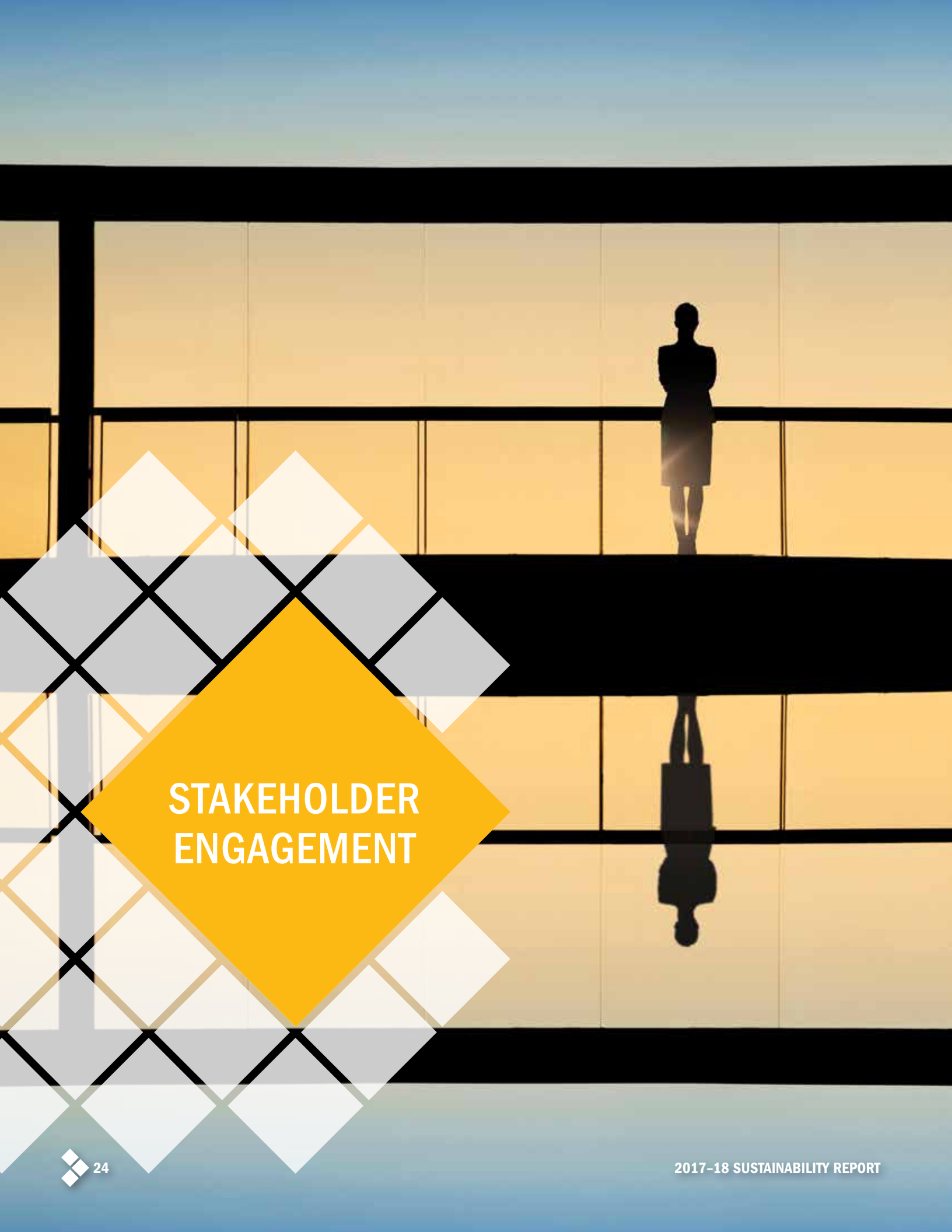
Green Initiative Task Force 2017-18 Annual Report

View the full *Green Initiative Task Force 2017-18 Annual Report* for more information.



[http://bit.ly/
GreenReport18](http://bit.ly/GreenReport18)





STAKEHOLDER ENGAGEMENT

Stakeholder Engagement

We believe including the voices of our members and stakeholders in conversations relative to fund sustainability is essential.

CalSTRS staff has developed a comprehensive strategy to communicate with our stakeholders, including financial entities, groups representing our members, the Governor’s administration, legislators, employers, members, labor representatives, our employees, suppliers, contractors and the media.

Staff regularly engages and elicits feedback from our stakeholder groups through board meetings, hosted events, email and online surveys, public meetings, and web-based communications.

Our anonymous 2018 materiality survey asked stakeholders to prioritize 11 topics based on their importance to CalSTRS in meeting our mission. Those surveyed included members, employees and external stakeholders. Select stakeholders were invited

to participate based on their commitment to California’s public educators, their principles of sustainability related to financial markets, or the direct impact that CalSTRS’ actions have on their livelihood and financial future.

The survey was solicited via social media, email and CalSTRS.com, and was open for one month in spring 2018. Almost 600 stakeholders participated in the materiality survey.

Highest Ranked Topics by Stakeholder Groups

Based on this feedback, this report highlights three material topics: Path to Full Funding, Member Retirement Preparedness and Cybersecurity. In addition, Stakeholder Engagement (above) and Ethics and Compliance (pages 42–44) are discussed as part of our Standard Disclosures.

Rank	Employees	Members	Other Stakeholders
1	Path to Full Funding	Cybersecurity	Member Retirement Preparedness
2	Member Retirement Preparedness	Path to Full Funding	Stakeholder Engagement
3	Cybersecurity	Member Retirement Preparedness	Ethics and Compliance



**PATH TO
FULL FUNDING**

Path to Full Funding

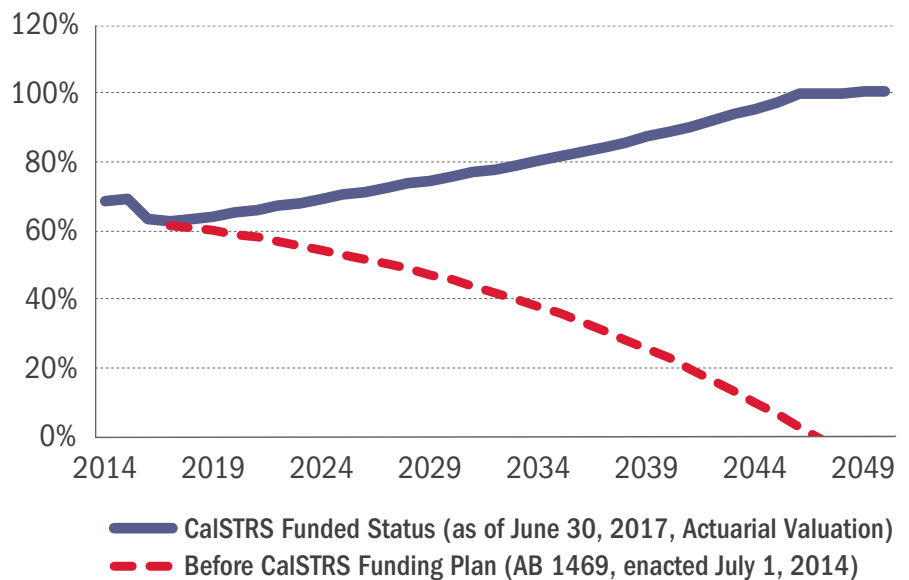
In June 2014, Assembly Bill 1469 (Bonta) created a specific plan to fully fund the CalSTRS Defined Benefit Program over 32 years. The bill included new limited authority for the Teachers' Retirement Board to adjust employer and state contribution rates. Prior to the bill, contribution rates were set in statute.

Targeting full funding is the most financially prudent way to provide benefits to past, present and future California educators. Plan design proposals with a target of less than full funding may have resulted in lower employer and state contribution rates in the near term but would have increased future costs.

AB 1469 outlines a model of shared responsibility with gradual contribution rate increases among the State of California, members and employers. Without the plan, it was projected the fund would have become insolvent by 2046.

The contribution rates established in the funding plan were designed to fully fund the Defined Benefit Program based on the actuarial assumptions in place at the time the bill was enacted. Those assumptions are periodically reviewed and adjusted, if necessary, by the Teachers' Retirement Board. In 2017, the board lowered the investment return assumption and adopted new mortality improvement assumptions.

Historical and Projected Funded Status



“We make sure that the assets we have on hand, along with the contributions we expect to collect in the future, will be enough to secure the retirement benefits of our teachers and to make sure we are sustainable for the long term.”

—David Lamoureux, System Actuary

Even with these changes, the funding plan continues to put CalSTRS on the path to full funding.

In May 2018, the board adopted the actuarial valuation based on June 30, 2017, data, which set the funded status of the Defined Benefit Program at 62.6 percent. As anticipated by the funding plan, improvements in funding levels have been minimal and will continue to be minimal over the next few years while contribution

rates for both employers and the state continue to be phased in. CalSTRS is on the path to reach near full funding by 2046 based on scheduled contribution rates and the board exercising its authority to increase the state contribution rate incrementally.

The funding plan is operating as designed, with predictable and gradual rate increases that are shared among the state, members and employers.



State of California

As of July 1, 2018, the state contribution rate is 9.828 percent.

In February 2017, the board adopted updated actuarial assumptions. For fiscal year 2017–18, the board exercised its authority to increase the state contribution by 0.5 percent of payroll. Current projections show that additional increases in state contributions of 0.5 percent of payroll will be needed for the next four fiscal years to reach full funding by 2046.

Members

As of July 1, 2018, member contribution rates are:

- 10.25 percent
(2% at 60 members)
- 10.205 percent
(2% at 62 members)

Prior to AB 1469, the contribution rate for members was 8 percent and had not been increased since 1972. Note that the contribution rate for 2% at 62 members was increased by 1 percent effective July 1, 2018, as per a requirement set by the Public Employees' Pension Reform Act (PEPRA) of 2013.



System Actuary David Lamoureux discusses how CalSTRS uses actuarial data to measure system performance and monitor the funding plan to secure the retirement benefits of our members.

Member Contributions

Prior to AB 1469, the contribution rate for members was 8 percent and had not been increased since 1972.

Effective Date	Prior	AB 1469 Rates	
	All Members	2% at 60 Members	2% at 62 Members
July 1, 2014	8%	8.15%	8.15%
July 1, 2015	8%	9.20%	8.56%
July 1, 2016	8%	10.25%	9.205%
July 1, 2017	8%	10.25%	10.205%

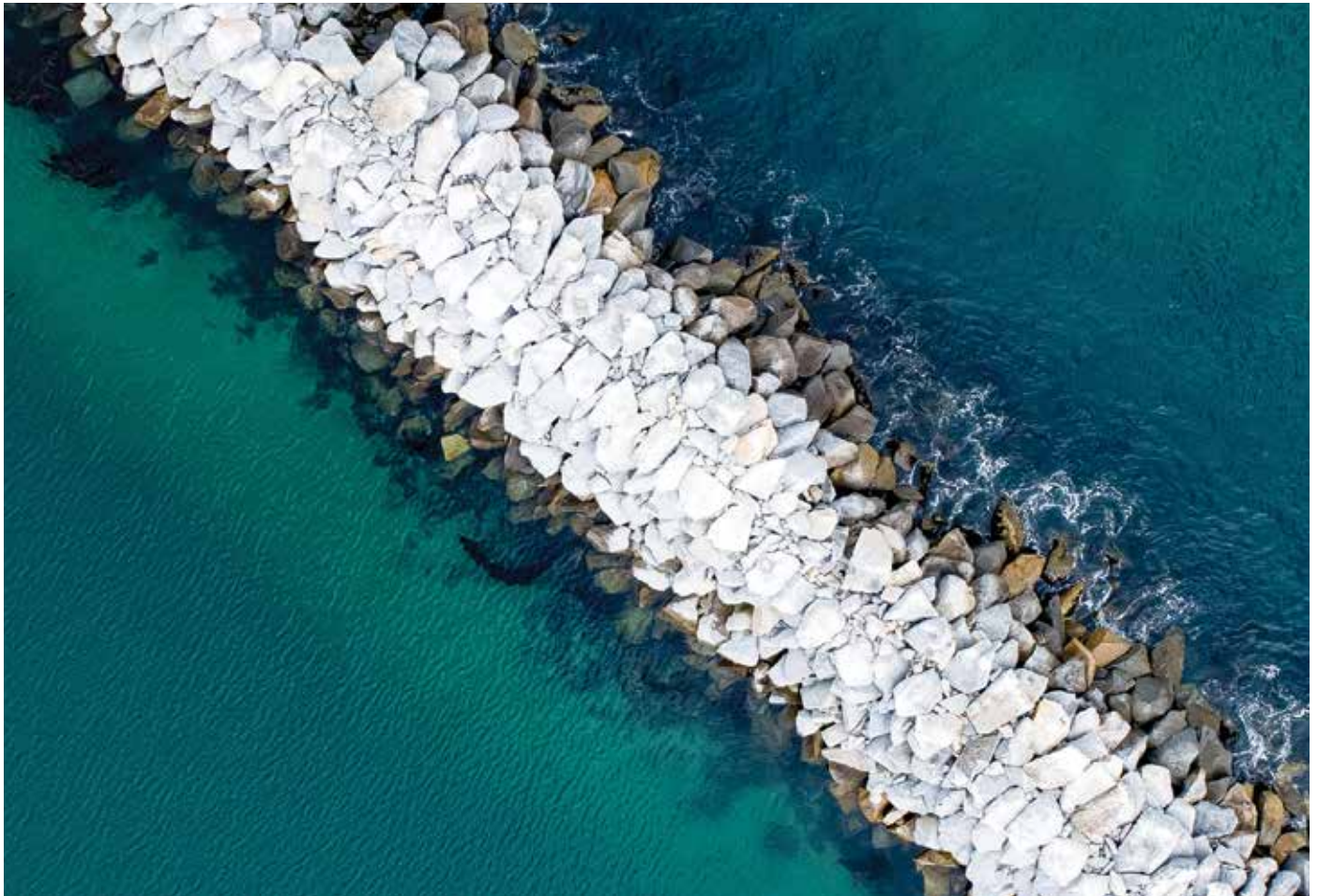
Employers

As of July 1, 2018, the employer contribution rate is 16.28 percent.

The 2014 employer contribution rate of 8.25 percent was scheduled to increase 10.85 percent over several years. Beginning in fiscal year 2021–22, the funding plan provides the Teachers' Retirement Board limited authority to adjust the employer contribution rate, if necessary, to fully fund the remaining unfunded liability by 2046. Those adjustments are limited to 1 percent annually, not to exceed 20.25 percent of creditable compensation.

Employer Contributions

Effective Date	Prior Rate	Increase Under AB 1469	Total Contribution Rate
July 1, 2014	8.25%	0.63%	8.88 %
July 1, 2015	8.25%	2.48%	10.73%
July 1, 2016	8.25%	4.33%	12.58%
July 1, 2017	8.25%	6.18%	14.43%
July 1, 2018	8.25%	8.03%	16.28%
July 1, 2019	8.25%	9.88%	18.13%
July 1, 2020	8.25%	10.85%	19.1%



The Value of Investments

In addition to the state, member and employer contributions, a significant factor in the success of the funding plan are investment returns, and more specifically, the board’s asset allocation decisions and adoption of investment strategies.

Stewardship at CalSTRS includes implementing responsible investment strategies. As a long-term investor, we take steps to balance risk with opportunity to preserve the integrity and strength of the fund. Managing an investment portfolio exceeding \$225 billion requires thoughtful diligence to monitor investment

Asset Liability Management Team

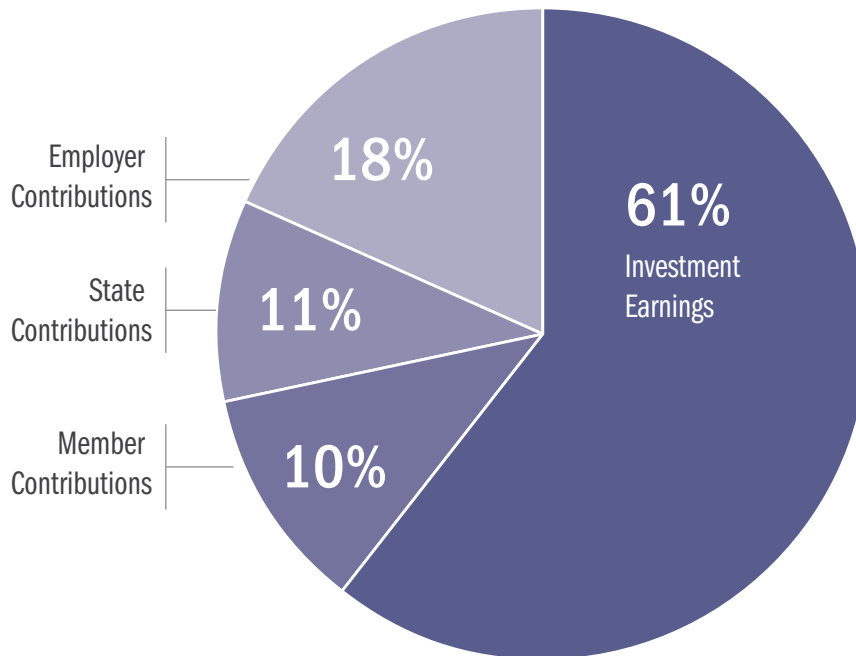
Formed in 2017, our Asset Liability Management team includes staff from Actuarial Resources, Financial Services and the Investments Branch. The team established an ALM Framework that integrates assets and liability to assess funding risk and guide decisions related to investment strategy, cash management and actuarial policies.

performance, analyze projections, and take necessary actions to ensure a stable, risk-adjusted return profile.

State, member and employer contributions are invested to provide retirement, disability and survivor benefits for California’s nearly 950,000 educators and

their beneficiaries. Investment returns continue to account for approximately 60 percent of the resources necessary to fund CalSTRS benefits. In fiscal year 2017-18, with a 9 percent return on investments—well above the assumed rate of 7 percent—CalSTRS fiscal position was strengthened.

CalSTRS Projected Benefit Funding Sources



Note: Based on an expected investment return of 7% each year.

Funding Levels and Risks

The third annual report on CalSTRS funding levels and risk indicates the funding trajectory has improved considerably but significant risks remain. Key results and findings of the report include:

- The CalSTRS Defined Benefit Program continues to mature, which increases the system’s sensitivity to investment volatility, especially for the state contribution rate.
 - A better-than-expected investment return in 2017–18 has improved projected funding levels and mitigated some of the expected increases to the state’s contribution rates.
 - The largest risk facing CalSTRS’ ability to reach full funding is risk from investment volatility.
- A recession resulting in both decline in active membership and a period of lower investment returns would put significant strain on CalSTRS’ ability to achieve full funding.
 - While not material and small in comparison to the overall size of CalSTRS, the trend of new charter schools not electing to participate in CalSTRS continues to increase.

Funding Plan Accountability

Beginning July 1, 2019, CalSTRS will submit a funding status report to the Legislature every five years to provide an assessment on the soundness and sustainability of the Defined Benefit Program. Existing statute requires that the report compares the funding levels and projected contribution rates at the time the funding plan was enacted to those based on the June 30, 2018, actuarial valuation. The report must also indicate if additional contributions are needed to reach full funding by 2046.



RETIREMENT PREPAREDNESS



Retirement Preparedness

To prepare for retirement, our members need to understand what their income needs will be and how much their defined benefit will provide toward that goal. Other important factors to consider in retirement planning include career longevity, additional sources of income, special considerations for our members regarding Social Security and how long an individual will live in retirement.

Career Longevity and Income Sources

The longer a member works, the greater their benefit will be. For CalSTRS members who work 30 or more years and retire with the maximum age factor, their defined benefit pension may be sufficient to maintain their preretirement standard of living. Since members retire with an average of 24 years of service and some earlier than full retirement age, for many there is a gap between their retirement benefit and their preretirement income.

We encourage members at all career stages to understand the need for supplemental savings such as CalSTRS Pension2, CalSTRS' voluntary defined contribution plan.

Social Security Considerations

California's public school educators do not pay into Social Security for CalSTRS-covered employment.

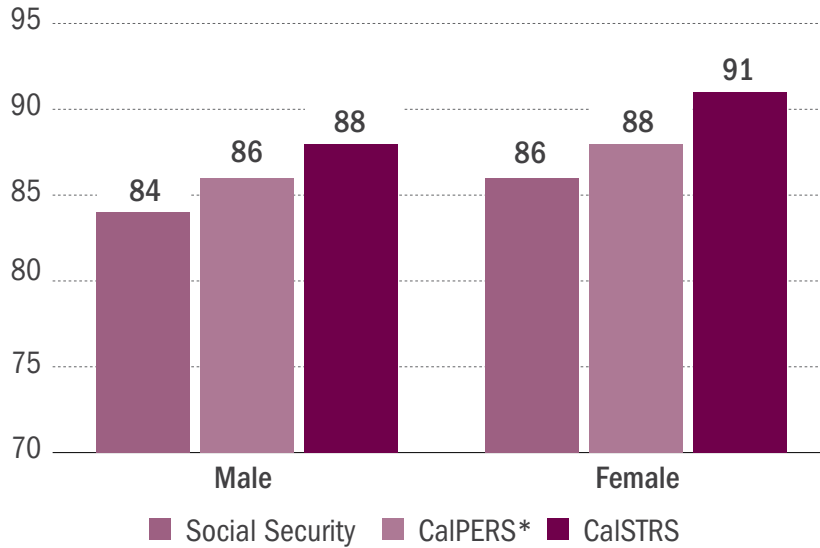
Social Security is a federal program, and neither CalSTRS nor the State of California has control over eligibility requirements or benefit calculations.

Members need to be aware that if they expect to receive a Social Security benefit through other employment or their spouse, two federal rules—the Windfall Elimination Provision and the Government Pension Offset—may leave them with a smaller Social Security benefit or possibly no benefit at all.

Life Expectancy for CalSTRS Members

CalSTRS Members Live Longer Than Members of Other Pension Systems

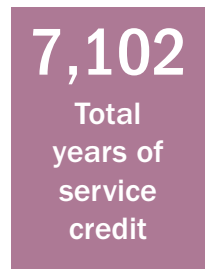
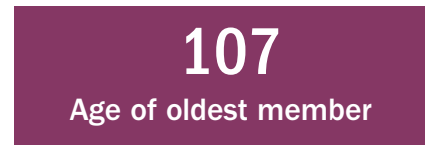
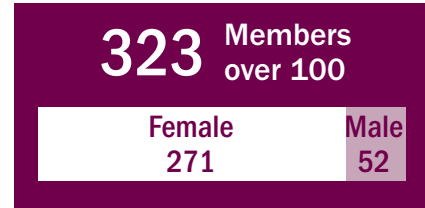
Expected age at death for members of Social Security, CalPERS* and CalSTRS who retired at age 62 in 2018.



*Includes some county, city and safety retirement systems and state employees.

CalSTRS Has a Long Relationship with Members

Data as of June 30, 2018



Life Expectancy

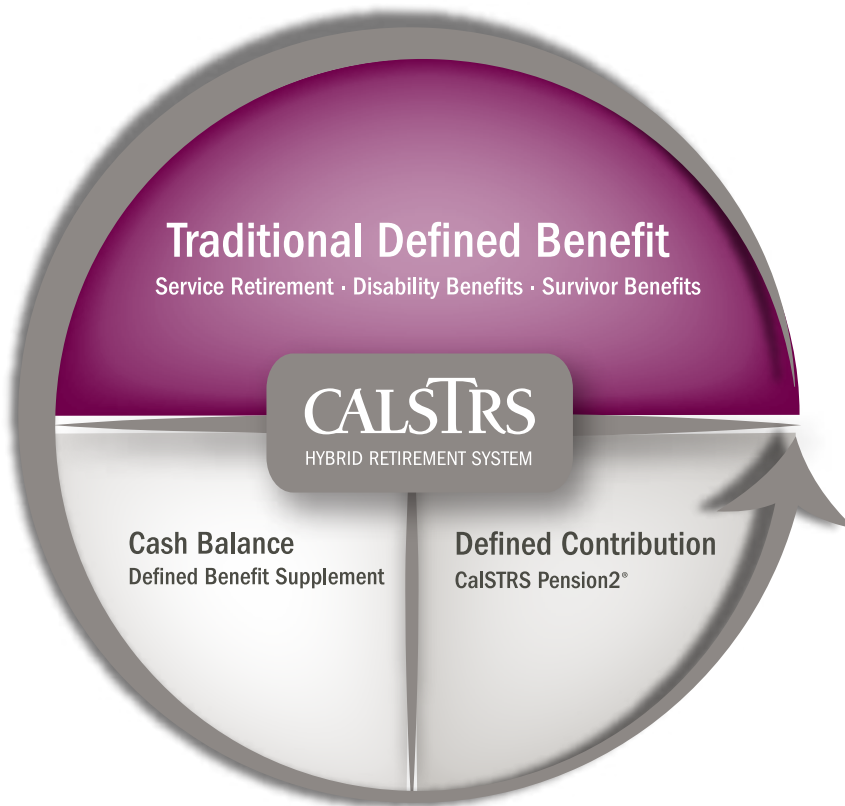
CalSTRS members are expected to live longer than the average Social Security retirement recipient and longer than the average California Public Employees' Retirement System member.

CalSTRS is dedicated to communicating to our members the importance of planning for increased life expectancy. This includes considering a longer career and contributing to supplemental savings early in their careers.

While our members' careers may span two to three decades, we will typically share a 60- to 70-year relationship with them. Our commitment to sustainability ensures we provide benefits to our members and their beneficiaries throughout those extended years.

CalSTRS Hybrid Retirement System

CalSTRS administers a hybrid retirement system consisting of traditional defined benefit, cash balance and voluntary defined contribution plans:



Traditional Defined Benefit Plan

The CalSTRS Defined Benefit Program includes a guaranteed lifetime benefit based on a formula set by law that calculates a member's age, service credit and final compensation.

The CalSTRS retirement benefit is a strong foundation. On average, the benefit replaces about 50 to 60 percent of a career educator's salary. According to financial professionals, members may need 80 to 90 percent of their final salary to retire comfortably. CalSTRS provides additional plans to help members prepare financially and meet their retirement goals.

The Defined Benefit Plan Formula

The defined benefit plan is based on a formula, not on how much a member contributes or how well CalSTRS investments perform.

Service Credit	×	Age Factor	×	Final Compensation	=	Member-Only Benefit
The number of school years, including partial years, members have worked and contributed to CalSTRS.		A percentage based on age at retirement.		The highest average annual compensation earnable for 36 consecutive months, or the highest 12 consecutive months for 2% at 60 members who have more than 25 years of qualified service credit.		If members wish to provide a lifetime benefit to a spouse or other qualified beneficiary after their death, they may choose a Modified Benefit.

Cash Balance Plans

Defined Benefit Supplement Program

CalSTRS Defined Benefit members have a Defined Benefit Supplement account that provides additional income for their retirement. Since members cannot earn more than one year of service credit in a school year, contributions on earnings in excess of one year of service, up to the compensation cap, are credited to this account instead of the Defined Benefit Program.

Full-time educators build their Defined Benefit Supplement accounts when they take on extra-pay assignments such as summer school or coaching. Contributions earn a guaranteed interest rate and members can choose at retirement to receive the funds as an annuity or lump sum.

Cash Balance Benefit Program

The CalSTRS Cash Balance Benefit Program is an alternative to the Defined Benefit Program for part-time, substitute, adjunct and temporary educators. Employers contribute at least 4 percent of a participant's salary and typically participants also contribute 4 percent. Contributions earn a guaranteed annual interest rate. At retirement, participants receive all the funds in their account—their contributions and their employer's contributions, plus the compounded interest earned. The benefit can be taken as an annuity or a lump sum.

Defined Contribution Plan

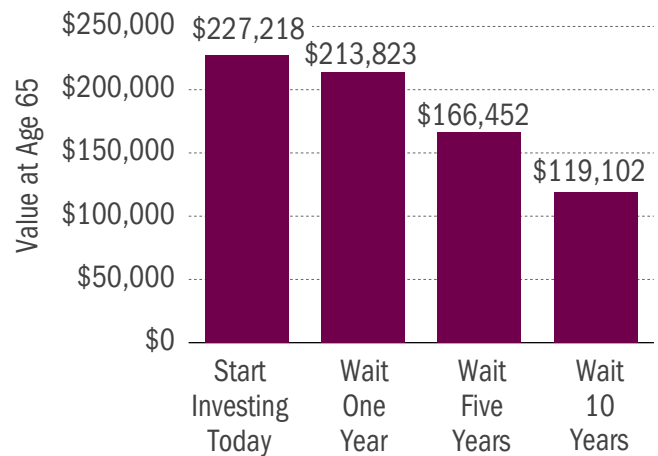
CalSTRS Pension2 is a voluntary defined contribution plan and an important piece of the CalSTRS hybrid retirement system. With Pension2, members set aside additional savings for retirement in 403(b), 457(b), Roth 403(b) and Roth 457(b) plans with low costs and flexible investment options.

This supplemental savings tool can help members fill the gap between their CalSTRS retirement benefit and their retirement income goal. We offer a Pension2 workshop where members learn how much of their retirement income will come from their CalSTRS monthly defined benefit, the gap between the benefit and their retirement income goals, and how investing in Pension2 sooner rather than later in their career can help fill that gap.

CalSTRS offers What If and Why Wait calculators, available online and in workshop materials, that allow members to estimate the potential savings growth due to the advantage of time and compounding interest. The Why Wait calculator illustrates how waiting one, five or 10 years decreases the value of investing.

The Power of Time and Money

How much could a 30-year-old member save if they contributed \$200 a month to a supplemental savings account such as Pension2?



The assumed yield of 5 percent is hypothetical and is not intended to serve as a projection of the investment results of any specific investment.

403bCompare.com allows members to compare fees, commissions, and performance for the 403(b) products their district offers, helping them sort through their many options and determine the best value.

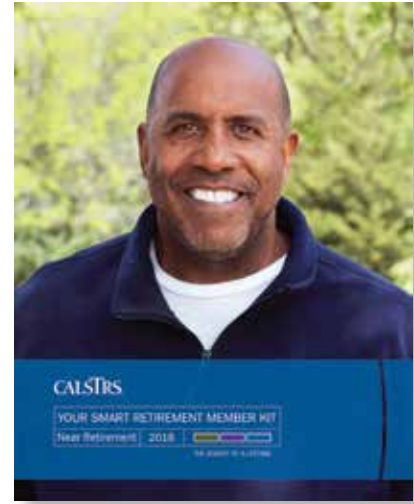
Member Kits



Early Career Kit



Mid-Career Kit



Near Retirement Kit

Helping Our Members Prepare

CalSTRS offers various services to help members learn about their CalSTRS benefits and plan for their retirement.

We provide educational services through our regional member service centers to help members of all career stages understand the value of their defined benefit pension and the importance of contributing to a voluntary supplemental savings program such as CalSTRS Pension2. These services include new educator events, financial awareness workshops, individual and group benefits planning sessions, and career stage-specific

member kits and workbooks to assist with targeted activities for early career, mid-career and near retirement planning.

Our three-part financial awareness workshop series takes an in-depth look at financial planning for members at all career stages.

Save for Your Future

Focus: Saving money leading up to retirement

Members learn household budgeting tips, how to establish short-term and long-term savings goals, and strategies to get on the right financial path.

Plan for Your Future

Focus: Planning income and expenses in retirement

Members create a retirement action plan, identify their retirement expenses, and learn about Medicare basics and Social Security offsets that may affect their retirement income.

Protect Your Future

Focus: Protecting retirement income

Members learn ways to project their retirement income and expenses, as well as strategies for withdrawing their invested dollars and to mitigate common retirement savings obstacles, including inflation and rising health care costs.

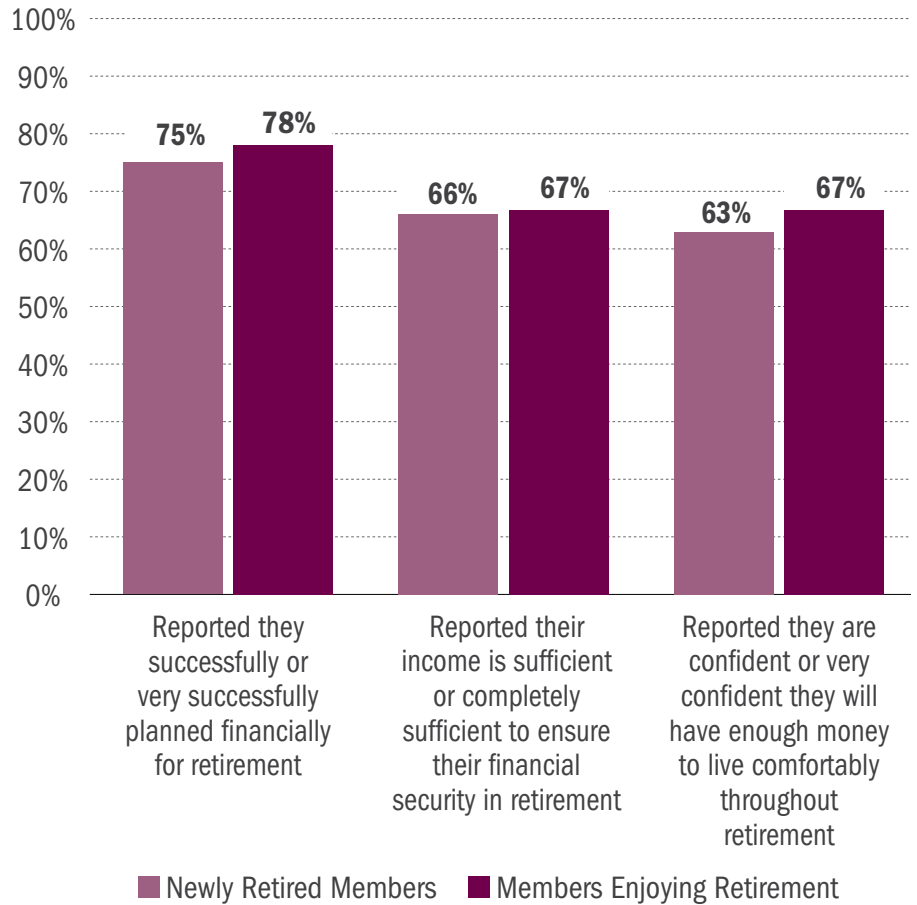


2018 Annual Member Survey Results

CalSTRS values our California educators as members, stakeholders and partners in their own retirement preparedness. We continue to improve our services and advance new initiatives that educate our members, raise awareness of their benefits and increase their confidence in creating financial security in retirement.

Each year we conduct a survey to gauge how well we are serving our members. Recently, CalSTRS began research efforts around understanding the factors that influence member financial preparedness for retirement and their financial security throughout retirement. According to our 2018 Annual Member Survey, the majority of retired survey participants report that they are well prepared for retirement.

Retirement Preparedness Survey Results





CYBERSECURITY & RESPONSIBLE BUSINESS PRACTICES



Information Security at CalSTRS

Cybersecurity is an increasing risk that can threaten the sustainability of any organization. For that reason, we focus substantial attention on this issue and are vigilant in detecting threats, proactively mitigating identified risks, and adapting to the rapidly evolving nature of the cybersecurity landscape.

The CalSTRS Information Security Office regularly reports to the board about actions taken to strengthen CalSTRS' cybersecurity posture, including prevention, detection and response.

We recognize the need for cybersecurity to protect data contained within our organization from ever-growing and challenging threats, including the rapid increase in both the number and

Information Security Office Staff Responsibilities

- Develop and update information security policies.
- Educate employees and CalSTRS members.
- Ensure compliance with policies, standards, strategies and industry best practices.
- Perform ongoing monitoring and vulnerability assessments.
- Maintain high-level expertise in the discipline of computer and network security, virus detection, vulnerability assessment and hacking methodologies.
- Advise the board on cybersecurity mitigation strategies.

frequency of reported breaches outside our organization and the significant costs and reputational risks of responding to a breach. Appropriate risk management and oversight are required to ensure due care is applied to continuously assess threats and protect the organization's and members' data.

Our Information Security Office staff reviews and adjusts security practices by breaking down threats and trends into component parts. The team then addresses those areas where we have less maturity or potential vulnerability.

Assessing Cybersecurity

CalSTRS partners with an outside information security firm to assess the security infrastructure, identify gaps and make recommendations to remediate them. Annual third-party assessments are part of our measurements to test and validate the effectiveness of current security measures. The primary goal of performing assessments is to ensure CalSTRS has a robust

security program designed to protect the confidentiality of member data as well as protect assets.

Implementing the Center for Internet Security's Critical Security Controls fortified our cybersecurity posture and substantially reduced the risk of a cyberattack. CIS is an independent, nonprofit entity that harnesses the power of the global IT community to safeguard

85 percent

Reduction of cyberattack risk by applying just five CIS controls

94 percent

Reduction of cyberattack risk by implementing all 20 CIS controls

—Reported by CIS

SECURITY Is Not Complete Without U

At CalSTRS, we believe that every employee is our first line of defense and shares responsibility to protect the confidentiality, integrity and availability of CalSTRS' information assets. Our strategy supports the approach that one of the most important lines of cybersecurity defense is arming employees with tools and the knowledge necessary to detect suspicious activities and minimize the chance for security incidents. The ISO team ensures that all employees are properly trained and observe information security rules and policies.

Employee Awareness and Education

- Mandatory annual training
- Dedicated intranet site with resources, terms and FAQ
- Tailored onboarding presentations
- Educational campaigns throughout the year

Employee Compliance

- Clear expectations
- Strong internal controls
- Signed Confidentiality, Non-Disclosure and Acceptable Use Agreement
- Annual ISO audits of security policies, systems and accesses

2017-18 FY Results

100%: Employees reviewed and signed Confidentiality, Non-Disclosure and Acceptable Use Agreement

100%: Employees completed annual mandatory training

0: High-risk findings

0: Substantiated complaints concerning breaches of customer privacy

private and public organizations against cyber threats. CIS Controls and CIS Benchmarks are the global standard and recognized best practices for securing IT systems and data against the most pervasive attacks. Our decision to measure against the CIS Critical Security Controls helps to lessen the negative impacts that can result when solely relying on a risk-based compliance framework.

CalSTRS completed initiatives in 2017-18 focused on implementing a machine learning (artificial intelligence) solution to perform behavioral analytics of user and network activities. Applying artificial intelligence to behavioral

analytics significantly enhances our threat-detection capabilities.

The long-term benefit of implementing controls such as the Center for Internet Security's Critical Security Controls and educating staff is a reduction in the number of low-risk alerts, allowing our security resources to more quickly detect and respond to higher-risk threats. Quicker response reduces time to remediate and minimizes potential impact to our business.

Each October we recognize National Cybersecurity Awareness Month, which was created as a collaborative effort between government and industry to ensure

every American has the resources needed to stay safe and secure online. CalSTRS participated in this national effort by presenting staff with a new education topic each week that focused on a specific cybersecurity issue.

CalSTRS emphasizes that each staff member plays a role in securing our information and assets. We support our staff in building the fundamental skills needed to recognize, analyze, and deal with security threats. We continually seek new ways to use various mediums and technologies to educate users on their role and how they can be secure in the workplace and in their personal lives.

A Culture of Ethics and Integrity

Compliance at CalSTRS

The CalSTRS Ethics and Compliance program serves as a foundation of good corporate governance. We are committed to an ethics and compliance program that is effective as well as supported and well understood by the organization. CalSTRS' goal is not to simply comply with the laws, regulations, policies and standards that apply to our business—we want all our employees to act with the highest standards of business ethics. The program is designed to prevent, detect and remediate issues that can arise when growing and sustaining a public organization.

In November 2017, the board adopted the Code of Ethics and Business Conduct which serves as the cornerstone of the enterprise compliance program. Employees are encouraged to report any actions they feel are unethical or

77 percent

Respondents who said:

- They were aware or very aware that CalSTRS has an Ethics and Compliance Program that includes an ethics hotline.
- They agree or strongly agree that in the event they have an ethics concern, they would report it.

—2018 All-Employee Survey

that do not meet our compliance obligations to their manager or anonymously using an independent Ethics Hotline. The Code of Ethics includes a non-retaliation policy for employees who report perceived violations or assist in the investigation of complaints. All complaints submitted to the Ethics Hotline are investigated by the CalSTRS Office of the General Counsel and Human Resources.

In the 2018 CalSTRS All-Employee Survey, 77 percent of respondents said they were aware of avenues to report ethics concerns and would be willing to report. Members of the CalSTRS Executive team take their role to model ethical behavior and support the ethics and compliance program seriously. CEO Jack Ehnes reinforced the importance of ethics and compliance reporting during Town Hall meetings and in an all-staff email.

Ethics and Compliance Policies and Training

CalSTRS employees are subject to various policies, statutes and regulations that relate to ethical conduct, with the responsibility to understand and abide by them all.

In an effort to support this accountability, CalSTRS requires new hires to review specific

policies on the date of hire, and all employees are subject to a mandatory policy recertification process each year. Certain CalSTRS employees in designated positions listed in the conflict of interest code are required to file the *Statement of Economic Interests* form (Form 700) upon assuming

the position, annually thereafter, and when leaving office.

In addition, certain policies, statutes and regulations require disclosure filings and acknowledgments described in the following table.

Subject	Filing Timeline/Date	Summary/Action
Gift Policy	Employees file annually by April 1.	Employees review the Gift Policy and sign an attestation stating compliance with the policy.
Policy Prohibiting Insider Trading	Upon hire and annually thereafter by April 1.	Employees review the Policy Prohibiting Insider Trading and sign an attestation stating compliance with the policy.
Incompatible Activities Agreement	Upon hire and annually thereafter by April 1.	Employees review and sign the Incompatible Activities Agreement
Confidentiality, Non-Disclosure and Acceptable Use Agreement	Upon hire and annually thereafter by April 1.	Employees review and sign the Confidentiality, Non-Disclosure and Acceptable Use Agreement.
Internet Access Policy	Upon hire and annually thereafter by April 1.	Employees review and sign the Internet Access Policy and Acknowledgment.
Form 700 Statement of Economic Interests	Annually by April 1 for designated positions. New CalSTRS staff in designated positions file within 30 days of assuming office. Staff leaving CalSTRS must submit within 30 days of leaving office.	CalSTRS employees in designated positions file a <i>Form 700 Statement of Economic Interests</i> annually, and upon assuming and leaving office.
State Ethics Training	New CalSTRS employees and contractors designated in the conflict of interest code complete the ethics training and file their certificate of completion within six months of hire and biennially thereafter.	CalSTRS employees and contractors in designated positions participate in ethics training within six months of hire and every two years thereafter by April 1.

Ethics Training and Legal Responsibilities

How Binding Laws Apply to Public Employees

- Public servants are required to serve the public's interest and may not use their employment to serve private or political interests.
- Public officials who conduct themselves according to a standard that exceeds the minimum requirements set in the ethics laws help to maintain the public's faith in government.
- Disclosure requirements apply to every state-elected official and to almost all state agency department heads and members of state commissions, boards, committees and other bodies. They also apply to all

other state employees who have significant decision-making authority or input into agency decisions.

- All state agencies are required to adopt what is known as a "conflict-of-interest code." The code designates officials who are required to file a *Form 700 Statement of Economic Interests* and identifies their disclosure obligations.
- Designated employees must file a statement disclosing their interests when assuming office, annually while in office, and upon leaving office.

Required to Take Biennial Ethics Training

10

Board members

19

Designees

218

External representatives

441

Employees

Supporting Responsible Contractors and Suppliers



Doing Business With CalSTRS

CalSTRS is committed to socially and environmentally responsible business practices. We acquire goods and services in the best interest of CalSTRS, its members and beneficiaries. We seek opportunities to understand the environmental, social and governance positions of our contractors and suppliers to ensure alignment with CalSTRS' principles.

Our competitive purchasing process follows California state law. We provide our contractors

“Fair wage and benefit” is predominantly defined by comparison of the work to similar commercial projects in the local market.

with a set of environmental and social standards for all contracted business services which includes anti-discrimination clauses, human rights regulations, and fair labor and environmental compliances. These social and environmental mandates were established by the State of California, and CalSTRS

has the responsibility to ensure that we do business only with those in compliance.

The CalSTRS Responsible Contractor Policy seeks to monitor the use of labor in the development and management of real estate investments. The goal is to ensure

that pension fund capital is funding projects that pay a fair wage and benefit for all work and services related to the construction and management of the assets. The CalSTRS Real Estate Investment Office has overseen this policy since its inception in the 1990s and has been successful in reaching goals with participation at almost 100 percent by respective real estate managers.

We conduct an annual survey that helps identify our business contractors' alignment with CalSTRS' principles. In August 2018, we sent our annual questionnaire to our private industry-based business contractors with contracts valued at or above \$50,000 to assess their efforts in addressing environmental, social and governance risks. The questions

were based on 17 ESG-related activities, from employee development programs to ESG reporting.

We sent emails to 346 company representatives and 57 provided information on ESG efforts, resulting in a 16 percent response rate.

The results are summarized by activity type.

25% to 49% of Respondents	50% to 74% of Respondents	75% to 100% of Respondents
Publish sustainability reports	Employ health and safety programs	Provide career development programs
Report and/or manage greenhouse gas emissions	Practice energy conservation	Maintain employee retirement programs
Screen suppliers for ESG risk	Formalize ESG policies	Employ employee values and ethics policies
Operate in green facilities	Practice sustainable transportation/commuting	Manage information privacy and data security systems
	Practice waste reduction	Provide reporting mechanisms for grievances
	Consider sustainability in purchasing	
	Manage or conserve water use	
	Engage employees in sustainable practices	



**CALSTRS'
SUSTAINABLE
EMPLOYEE
CULTURE**

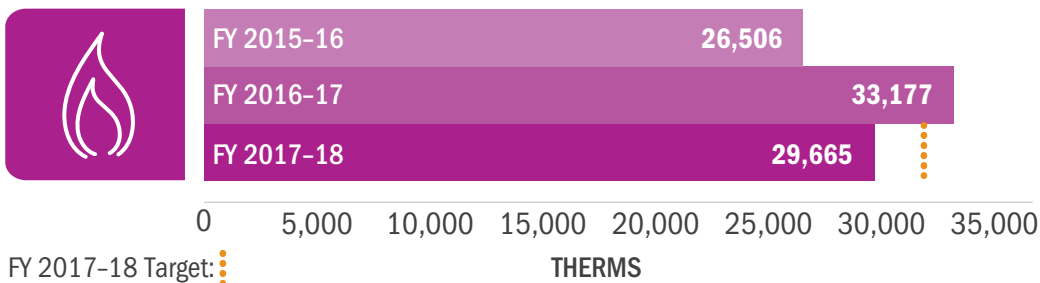
Headquarters' Environmental Performance

CalSTRS employs components of an environmental management system based on the International Organization for Standardization 14001 environmental management standards, including executive-level planning, employee engagement and the plan-do-check-act cycle of continuous improvement for building energy, water, waste, greenhouse gas emissions and alternate transportation. We established our targets in alignment with the LEED building certification standards and former California Governor Edmund G. Brown Jr.'s Executive Order B-18-12 for state facilities. Staff regularly monitors performance and communicates results internally within CalSTRS and to the State of California. Our CalSTRS employee-driven Green Rangers Team encourages employees to support these environmental efforts.

Energy

Natural Gas

In 2017-18, CalSTRS' Headquarters' natural gas use decreased due to a warmer winter than the previous year.



2017-18 Savings Target

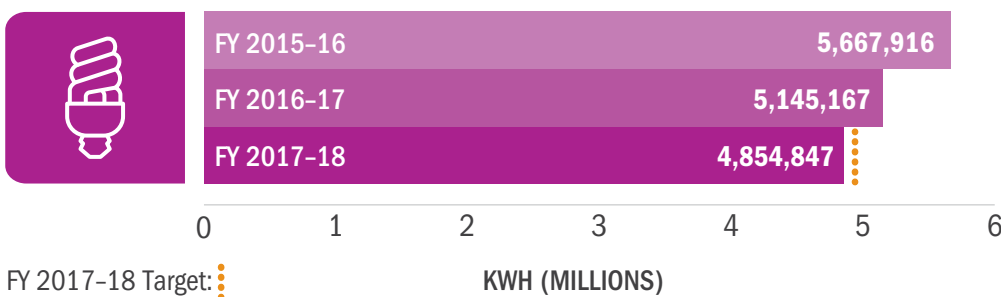
4% reduction from 2016-17 | Actual **11%** ▼

2018-19 Savings Target

Reduce consumption by 4%

Electricity

We voluntarily participate in the Pacific Gas and Electric Automated Demand Response program, which automatically relieves stress on the electrical grid when PG&E asks enrolled users to reduce energy usage. As a result of our participation in this program, our headquarters' energy use was reduced during the peak demand hours of 2-6 p.m. during the summer months, and ultimately throughout the year.



2017-18 Savings Target

4% reduction from 2016-17 | Actual **6%** ▼

2018-19 Savings Target

Reduce consumption by 4%

Greenhouse Gas Emissions

Scope 1 and Scope 2 Emissions

Since 2005, CalSTRS has been reporting headquarters' greenhouse gas emissions to The Climate Registry, a North American nonprofit organization. We report emissions annually for the prior calendar year and have fulfilled our goal to reduce our overall emissions by 20 percent compared to calendar year 2010.

CalSTRS Accounts for Six Greenhouse Gases:

- Carbon dioxide (CO₂)
- Methane (CH₄)
- Nitrous oxide (N₂O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulphur hexafluoride (SF₆)

Scope 1 and Scope 2

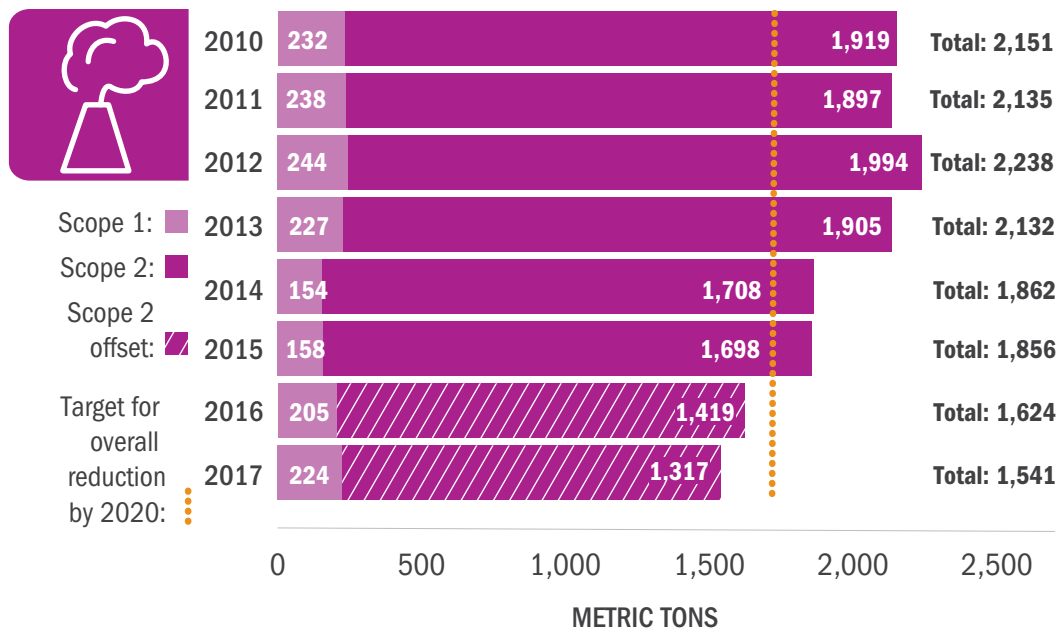
Scope 1 Direct Emissions:

natural gas, mobile combustion and fugitives, which includes stored refrigerants

Scope 2 Indirect Emissions:

purchased electricity

Scope 1, 2 Emissions



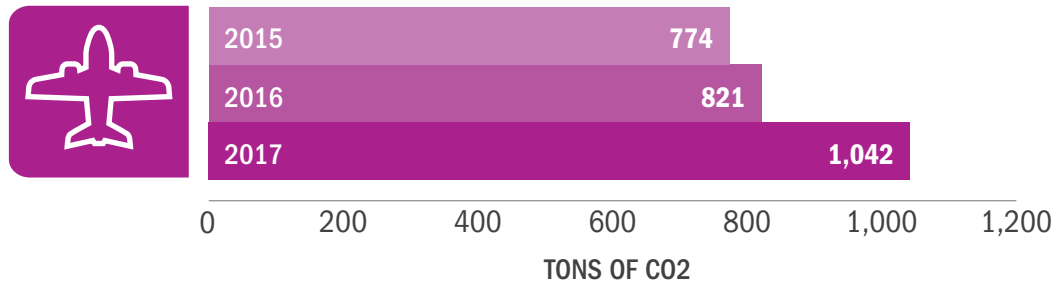
Scope 2 Emissions Offset

We regularly review greenhouse gas emissions performance and work toward reducing carbon emissions and increasing renewable energy use. In 2017, we purchased renewable energy credits in the amount of 5,118 megawatt hours from the Milo Wind Project, a renewable energy windfarm located in New Mexico. The purchase of renewable energy credits helps to advance the development of global clean energy choices while simultaneously contributing to reduced emissions, improved air quality and a shift toward a carbon-free economy.

Year	Scope 1 (Direct Emissions)	Scope 2 (Indirect Emissions)	Scope 2 Emissions Offset by Renewable Energy Credits	Total Net Emission
2016	205 metric tons	1,419 metric tons	-1,419 metric tons	205 metric tons
2017	224 metric tons	1,317 metric tons	-1,317 metric tons	224 metric tons

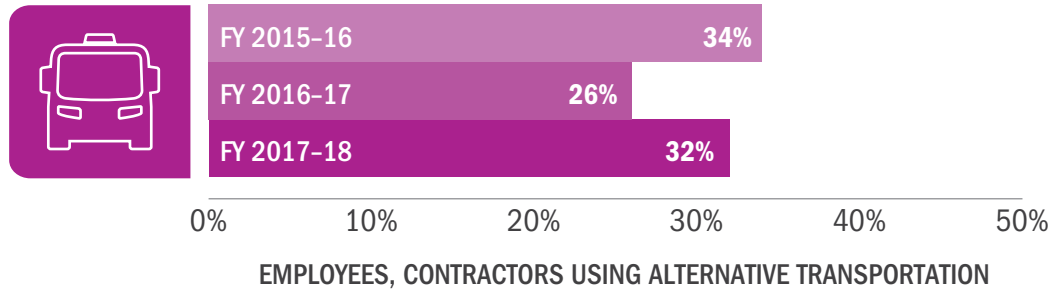
Scope 3 Emissions

Scope 3 emissions encompass all indirect business-related emissions outside of scope 2. We monitor and report emissions from airline flight travel and rental car usage, and use the California Green Lodging Directory of green-certified hotels. We have not initiated an organized effort to reduce scope 3 emissions at this time. Figures are representative of all employees.



Alternative Transportation Use

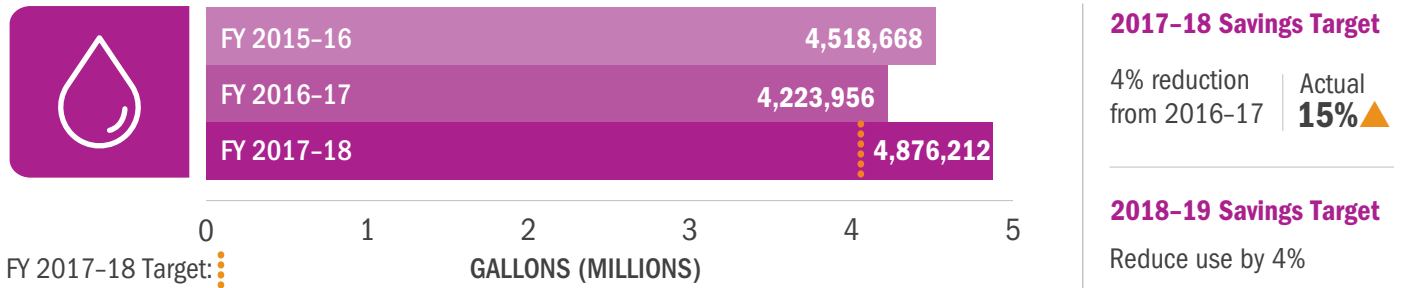
We encourage and support alternative transportation options for our employees and contractors to reduce traffic congestion and impact on the environment. In addition to saving on fuel costs, maintenance and parking, employees may be reimbursed for a portion of alternate commuting expenses.



Water

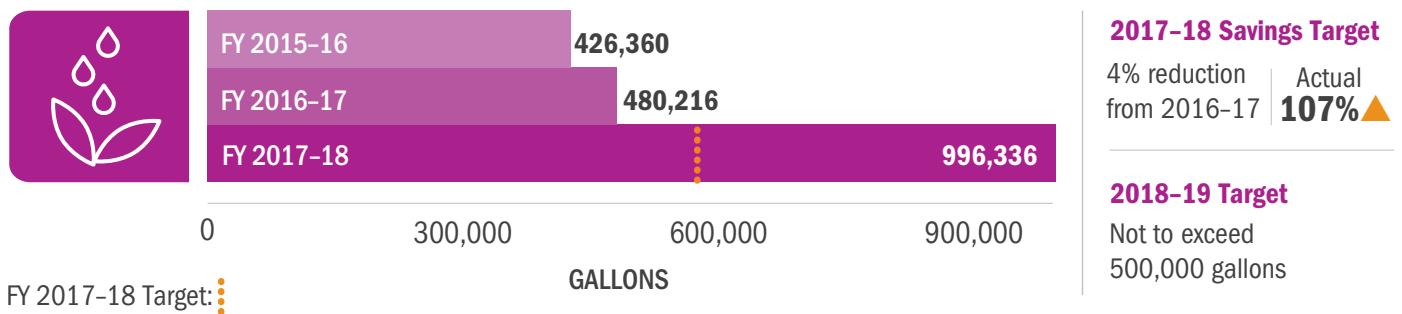
Building Water Usage

We attribute the increase in headquarters' 2017-18 building water use to a larger building population paired with longer work hours due to our Pension Solution technology project.

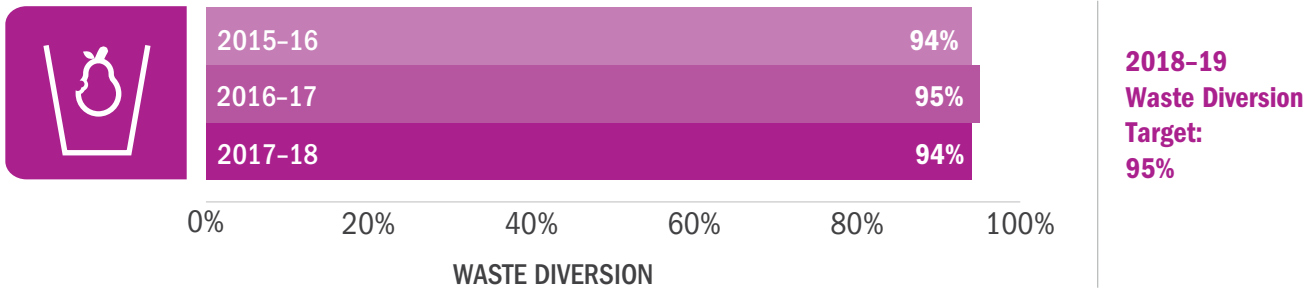


Irrigation Water

In 2017-18, headquarters' irrigation water use increased by 107 percent due to drought-based watering levels during 2014-2017 that caused the loss of some mature landscape. After the underperforming plantings were removed, composted and replaced, the irrigation water schedule increased to traditional, typical levels for new plants. The 2018-19 irrigation water target is to remain under 500,000 gallons.



Waste Diversion



TRUE Zero Waste

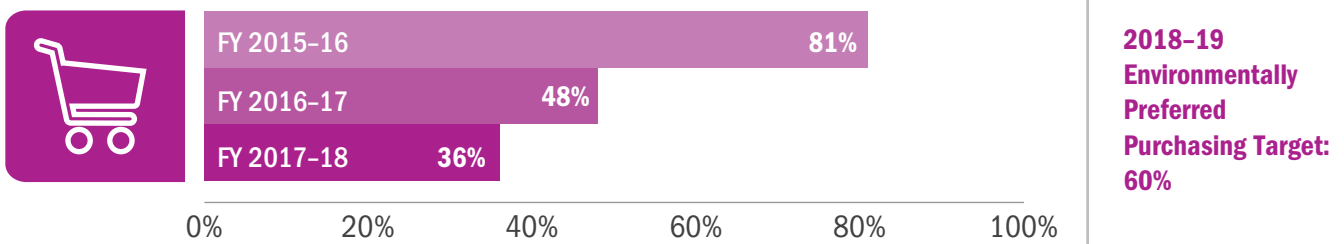
The Total Resource Use and Efficiency (TRUE) certification system, formerly known as Zero Waste, enables facilities to define, pursue and achieve zero waste goals, cut their carbon footprint, and support public health. The TRUE certification system promotes processes that consider the entire lifecycle of products and helps facilities quantify their performance and determine additional methods of improving their progress toward zero waste.

For 2017-18, the CalSTRS Headquarters building in West Sacramento earned the TRUE Zero Waste Certification at the Gold level for successfully diverting more than 94 percent of office waste from landfills, incinerators and the environment.

Environmentally Preferred Purchasing

CalSTRS' commitment to procuring environmentally preferred purchases is consistent with our fiduciary responsibility. Purchasing sustainably made goods and services from environmentally conscientious suppliers—locally when possible—reduces waste and emissions and saves natural resources. We strive to purchase Energy Star-certified products, such as electronics, appliances or other equipment, locally manufactured and distributed products, and desk supplies with pre- and post-consumer recycled content.

Our green procurement initiative calls for increasing the percentage of sustainably preferred purchases and includes increased employee education and training, revisions to purchasing processes and procedures, and monitoring of our progress in meeting LEED purchasing standards.



Supporting Sustainable Lifestyle Options

Each year, CalSTRS surveys employees to measure staff's views on a variety of important topics. In early 2018, 81 percent of respondents agreed that CalSTRS encourages employee wellness. Employee wellness is an important component of promoting positive lifestyle options. We believe our focus on innovative employee programs contributes to successful recruitments, engagement, productivity, retention and organizational sustainability.

As an organization committed to our employees and their personal sense of sustainability, we continue to explore opportunities to enhance healthy lifestyle options at headquarters and our member service centers.

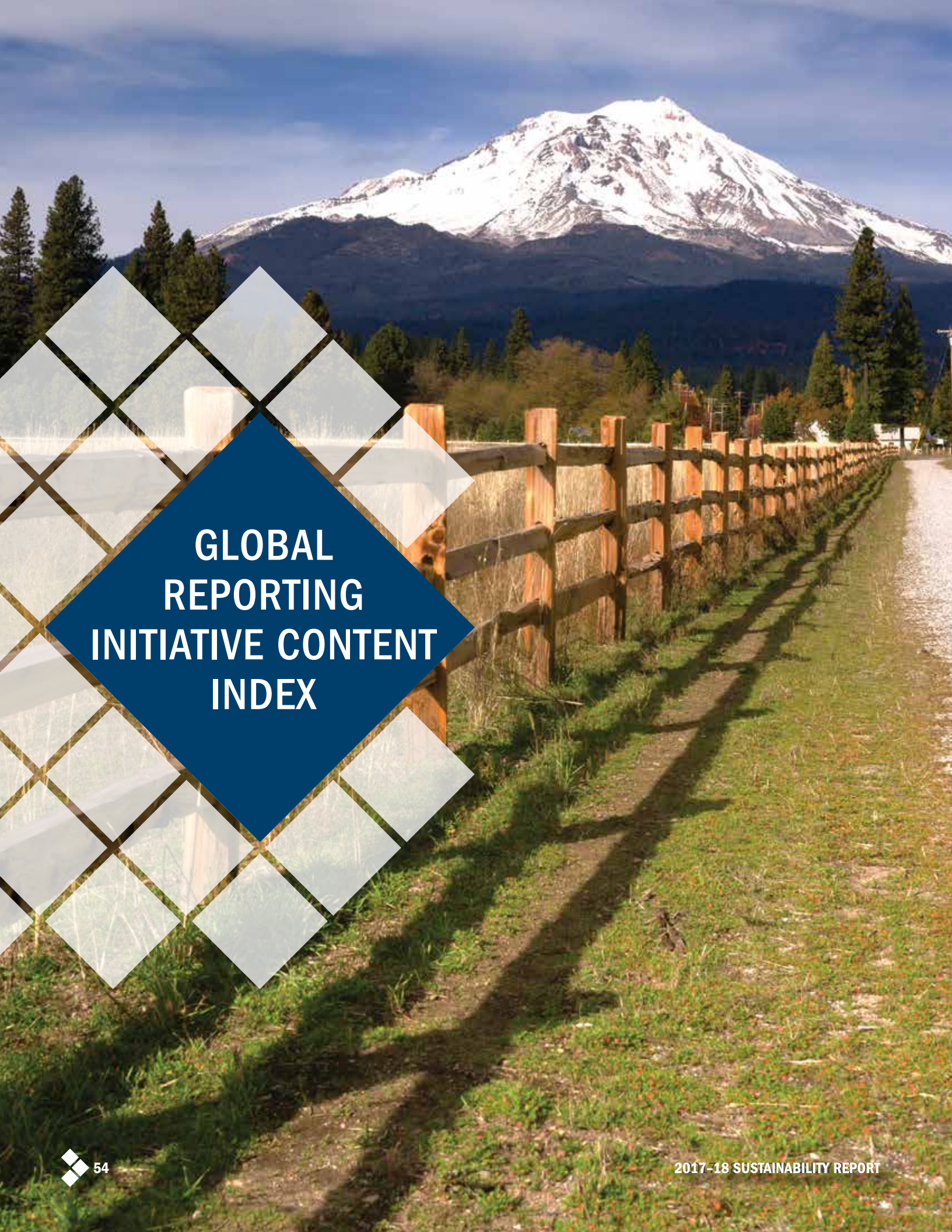
Some of the 2017-18 activities include:

- **Alternate Work/Telework Schedules**—the possibility to work an alternative schedule or work from home on a scheduled basis.
- **Alternative Transportation Benefits**—reimbursement options for eligible alternate transportation fees.
- **Annual Wellness Fair**—an opportunity to interact with visiting vendors about services related to health, safety and wellness.



Waterfront Gardens is one sustainable lifestyle feature at headquarters.

- **Bike Library**—a bicycle library of eight commuter-style bicycles that can be checked out for recreational purposes or to bike to meetings.
- **Blood Drives**—blood collected on site at CalSTRS to help meet the needs of our community.
- **Earth Day Events**—a day of commitment and activity to protect the environment and live a greener lifestyle.
- **Green Rangers**—a team of volunteer CalSTRS employees who support our environmental efforts.
- **Healthier U**—a statewide wellness platform that encourages healthy eating choices and provides wellness education and physical activity challenges.
- **May Is Bike Month**—a popular employee-led regional competition program that encourages leaving the car at home and banking miles of two-wheeled commuting.
- **StepJockey Challenge**—a stair climbing challenge tracked through an online app.
- **Top Loser**—a worksite wellness initiative that promotes healthy weight loss through competition.
- **Waterfront Gardens**—an onsite vegetable garden maintained by our cafe team to create fresh, healthy dishes.
- **Wellness Gym**—a free, onsite gym available for individual workouts as well as yoga and fitness classes.



**GLOBAL
REPORTING
INITIATIVE CONTENT
INDEX**

GRI Standards: 2016 Core Option

GRI 102: GENERAL DISCLOSURES 2016

GRI Disclosure

Number	Description	Response
ORGANIZATIONAL PROFILE		
102-1	Name of the organization	CalSTRS, the California State Teachers' Retirement System
102-2	Activities, brands, products and services	Pages 2-3, A Word From CEO Jack Ehnes Page 7, About CalSTRS Pages 33-38, Retirement Preparedness
102-3	Location of headquarters	100 Waterfront Place West Sacramento, CA 95605
102-4	Location of operations	Page 16, Office Locations and Employees
102-5	Ownership and legal form	Page 7, About CalSTRS
102-6	Markets served	Pages 2-3, A Word from CEO Jack Ehnes Page 7, About CalSTRS Page 14-15, Member Profile
102-7	Scale of the organization	Page 7, About CalSTRS Page 16, Office Locations and Employees Pages 17, 2017-18 Fiscal Performance Highlights FY 2017-18 financial information reported and verified in <i>CalSTRS Comprehensive Annual Financial Report</i> . * <ul style="list-style-type: none"> · Pages 27-29, Independent Auditor's Report · Pages 32-34, Financial Highlights · Pages 56-57, Statement of Fiduciary Net Position
102-8	Information on employees and all other workers	Page 16, Office Locations and Employees A record of employee information is stored in the CalSTRS Demographics database.
102-9	Supply chain	Pages 45-46, Supporting Responsible Contractors and Suppliers <i>CalSTRS Comprehensive Annual Financial Report</i> <ul style="list-style-type: none"> · Pages 102-105, Schedule of Investment Expenses · Pages 106-108, Schedule of Consultant and Professional Services Expenses
102-10	Significant changes to the organization and its supply chain	<i>CalSTRS Comprehensive Annual Financial Report</i> FY 2017-18 <ul style="list-style-type: none"> · Pages 30-31, Internal Asset Management · Page 31, Selection of Real Estate Consultant
102-11	Precautionary Principle or approach	Page 19, Sustainability Vision and Guiding Beliefs Page 20-21, Leading the Direction in Sustainable Finance Page 52, Environmentally Preferred Purchasing
102-12	External initiatives	Pages 20-21, Leading the Direction in Sustainable Finance
102-13	Membership of associations	Pages 20-21, Leading the Direction in Sustainable Finance

**CalSTRS Comprehensive Annual Financial Report* for fiscal year 2017-18 is available on CalSTRS.com/publications.

MATERIAL TOPICS

GRI Disclosure

Number	Description	Response
PATH TO FULL FUNDING		
103-1	Explanation of the material topic and its Boundary	Page 25, Stakeholder Engagement
103-2	The management approach and its components	Pages 27–29, Path to Full Funding
103-3	Evaluation of the management approach	Page 30, The Value of Investments Page 31, Funding Levels and Risks
201-1	Direct economic value generated and distributed	Page 7, About CalSTRS Page 14–15, Member Profile Page 15, Retirement Benefits Fuel Local Economies

RETIREMENT PREPAREDNESS

103-1	Explanation of the material topic and its Boundary	Page 25, Stakeholder Engagement
103-2	The management approach and its components	Pages 33–36, Retirement Preparedness Page 37, Helping Our Members Prepare
103-3	Evaluation of the management approach	Page 37, Helping Our Members Prepare Page 38, 2018 Annual Member Survey Results

CYBERSECURITY

103-1	Explanation of the material topic and its Boundary	Page 25, Stakeholder Engagement
103-2	The management approach and its components	Pages 40–41, Information Security at CalSTRS
103-3	Evaluation of the management approach	Pages 40–41, Information Security at CalSTRS
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Zero high-risk findings. Zero substantiated complaints concerning breaches of customer privacy. Page 41, SEC_RITY is Not Complete Without U

OTHER SPECIFIC DISCLOSURES

GRI Disclosure

Number	Description	Response
302 ENERGY 2016		
302-1	Energy consumption within the organization	Page 48, Energy
302-4	Reduction of energy consumption	Page 48, Energy
303 WATER 2016		
303-1	Water withdrawal by source	Page 51, Water
305 EMISSIONS 2016		
305-1	Direct (Scope 1) GHG emissions	Page 49, Greenhouse Gas Emissions
305-2	Energy (Scope 2) GHG emissions	Page 49, Greenhouse Gas Emissions
305-3	Other indirect (Scope 3) GHG emissions	Page 50, Scope 3 Emissions
306 EFFLUENTS AND WASTE 2016		
306-2	Waste by type and disposal method	Page 52, Waste Diversion

GRI Disclosure

Number	Description	Response
STRATEGY		
102-14	Statement from senior decision-maker	Pages 2–3, A Word From CEO Jack Ehnes
ETHICS AND INTEGRITY		
102-16	Values, principles, standards and norms of behavior	Page 8, Core Values Page 19, Sustainability Vision and Guiding Beliefs Pages 42–44, A Culture of Ethics and Integrity Pages 45–46, Supporting Responsible Contractors and Suppliers
GOVERNANCE		
102-18	Governance structure	Page 10, Executive Staff Pages 11–13, Teachers’ Retirement Board
STAKEHOLDER ENGAGEMENT		
102-40	List of stakeholder groups	Page 25, Stakeholder Engagement
102-41	Collective bargaining agreements	Page 16, Office Locations and Employees
102-42	Identifying and selecting stakeholders	Page 25, Stakeholder Engagement
102-43	Approach to stakeholder engagement	Page 25, Stakeholder Engagement
102-44	Key topics and concerns raised	Page 25, Stakeholder Engagement
REPORTING PRACTICE		
102-45	Entities included in the consolidated financial statements	<i>CalSTRS Comprehensive Annual Financial Report FY 2017–18</i>
102-46	Defining report content and topic Boundaries	Page 2–3, A Word From CEO Jack Ehnes Page 25, Stakeholder Engagement
102-47	List of material topics	Page 2–3, A Word From CEO Jack Ehnes Page 25, Stakeholder Engagement
102-48	Restatements of information	Not applicable for this report period
102-49	Changes in reporting	Page 25, Stakeholder Engagement
102-50	Reporting period	Page 5, Report Profile
102-51	Date of most recent report	April 2018
102-52	Reporting cycle	Annual
102-53	Contact point for questions regarding this report	Sustainability@CalSTRS.com
102-54	Claims of reporting in accordance with the GRI Standards	This report has been prepared in accordance with the GRI Standards Core reporting option.
102-55	GRI content index	The GRI Content Index adheres to the requirements of the GRI Standards Core reporting option.
102-56	External assurance	Page 5, Assurance



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